

2020

Internal Medicine Consultation for Dentists

Nina Mingioni, MD

Thomas Jefferson University, nina.mingioni@jefferson.eduFollow this and additional works at: <https://jdc.jefferson.edu/clined>Part of the [Dentistry Commons](#), and the [Internal Medicine Commons](#)[Let us know how access to this document benefits you](#)

Recommended Citation

Mingioni, MD, Nina, "Internal Medicine Consultation for Dentists" (2020). *Clinical Education*. Paper 1.<https://jdc.jefferson.edu/clined/1>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Clinical Education by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.

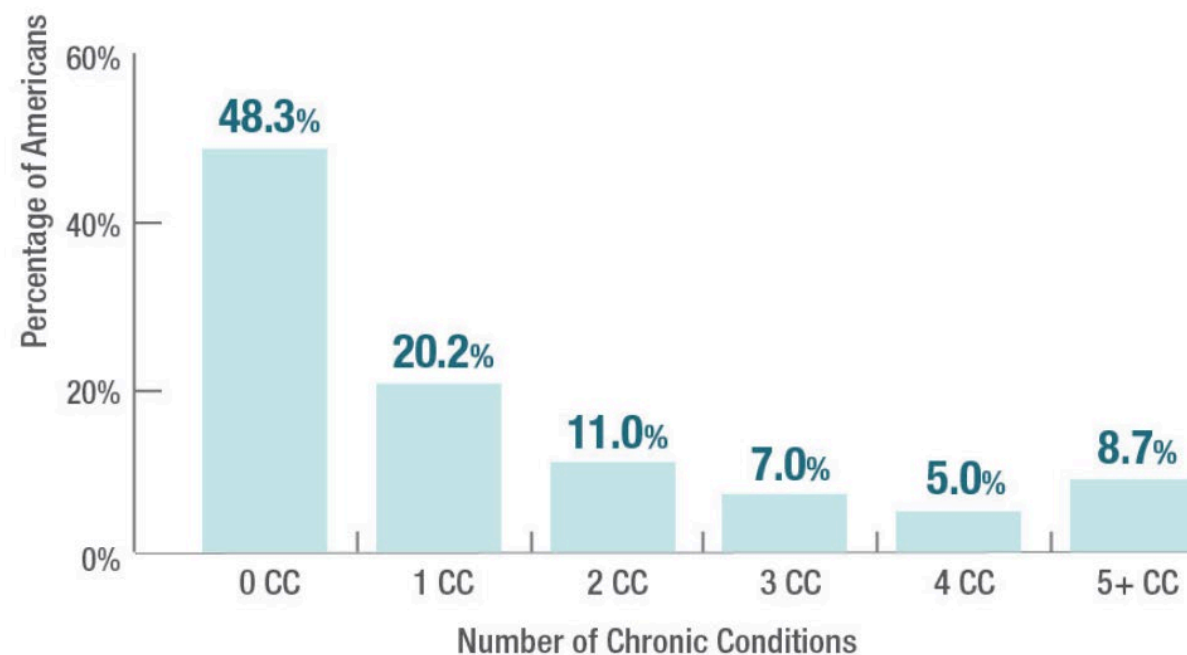
Internal Medicine Consultation for Dentists



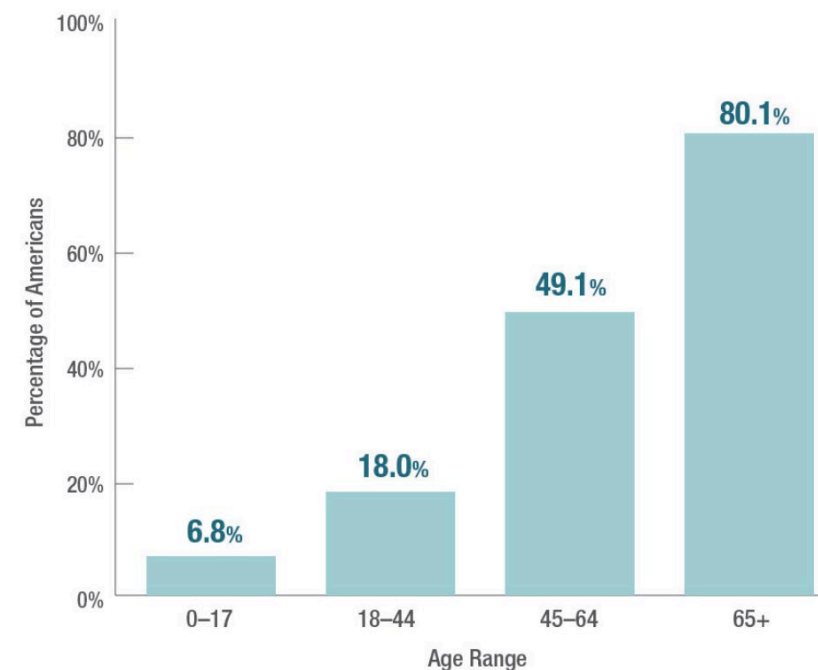
Nina Mingioni, MD FACP
Internal Medicine
Sidney Kimmel Medical College
Thomas Jefferson University



Percentage of All Americans with Chronic Conditions, by Number of Chronic Conditions – 2010



Percent of All Americans with Multiple Chronic Conditions, by Age Group – 2010



Learning Objectives



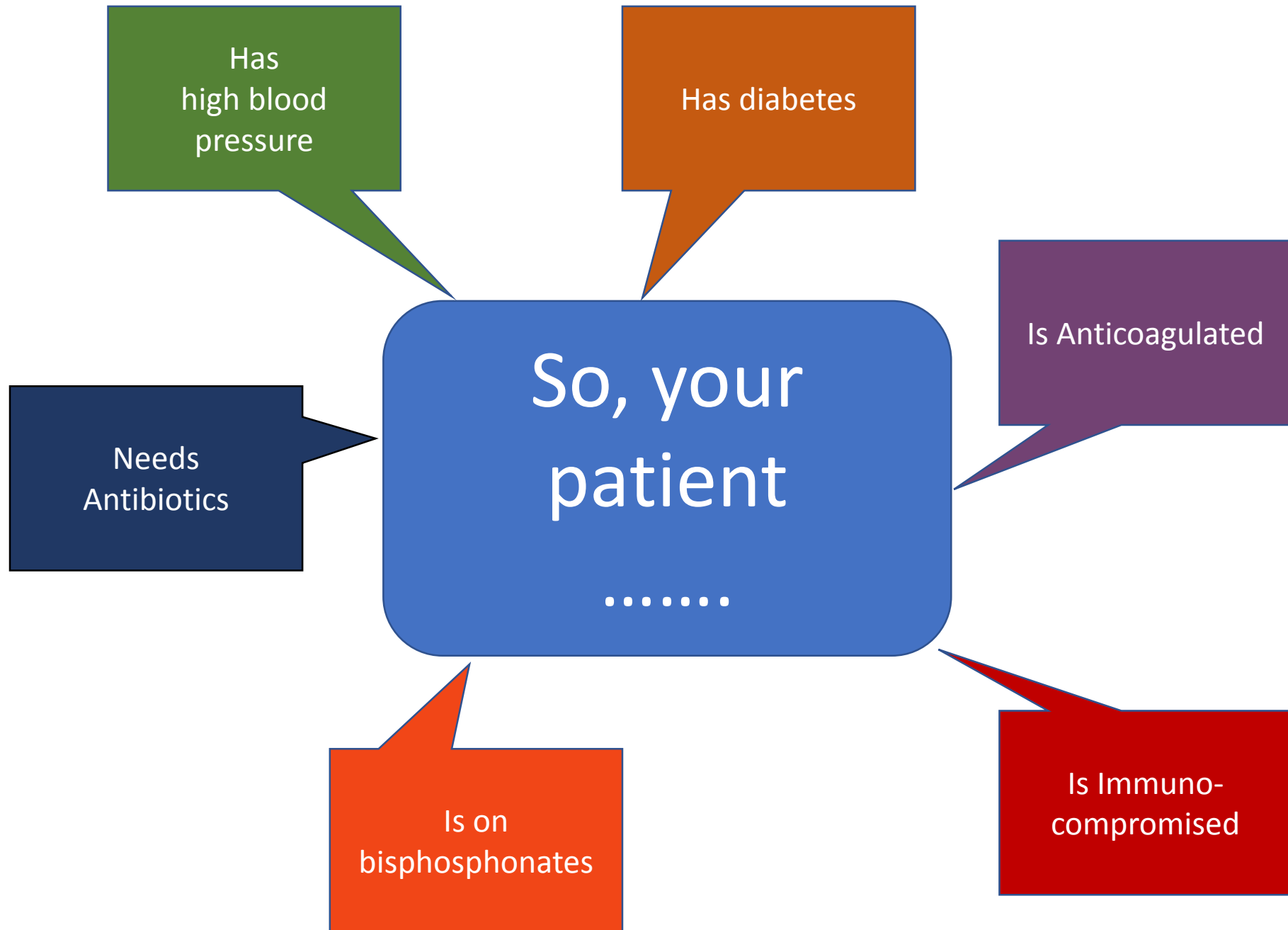
Recognize ubiquitous nature of common medical condition in general population

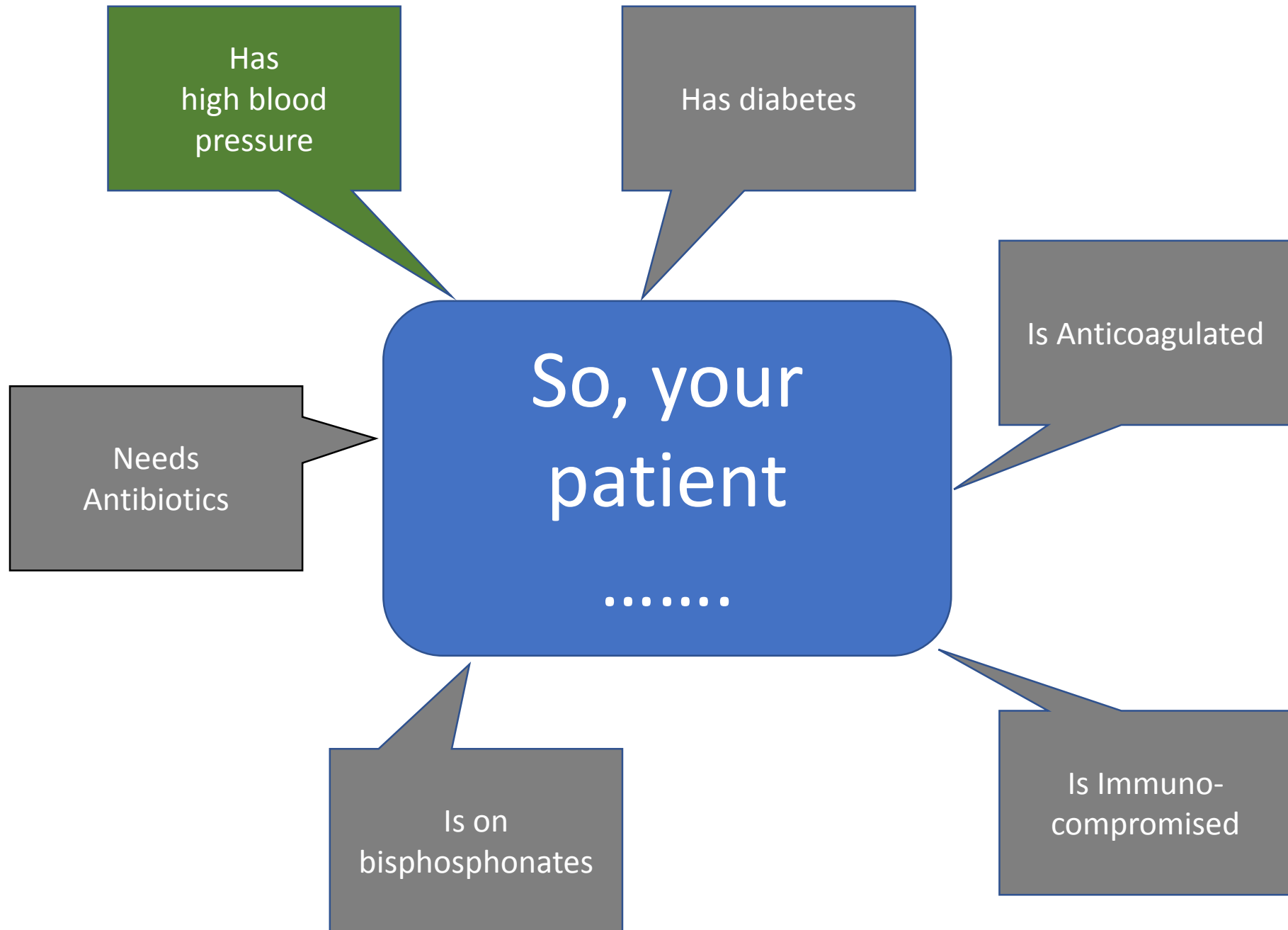


Discuss implications of common medical conditions on dental care of patients



Identify concerns affecting patients that would necessitate medical consultation prior to dental intervention





Hypertension



CHRONICALLY ELEVATED BLOOD
PRESSURE >140/90



29% OF ADULTS IN US
(1 IN 3!!!!!!)



ONLY 54% CONTROLLED



Elevated Blood Pressure in the office



Previously undiagnosed hypertension



Known hypertension

Chronically uncontrolled

Usually controlled, but uncontrolled today



White coat hypertension



Pain

What is “dangerously elevated blood pressure?”

Hypertensive Urgency

- SBP >180 and/or DBP >110
 - Asymptomatic
 - ?mild headache

Hypertensive Emergency

- SBP >180 and/or DBP >110
 - Altered Mental Status
 - Stroke (ischemic/hemorrhagic)
 - Acute coronary syndrome
 - Heart failure
 - Renal failure



When to send to ER?

- SBP >180 and/or DBP >110
 - Altered Mental Status
 - Stroke (ischemic/hemorrhagic)
 - Retinopathy
 - Acute coronary syndrome
 - Aortic dissection
 - Heart failure
 - Renal failure

Lethargy/confusion

Neurologic deficits

Blurry vision

Chest pain

Shortness of breath

Blood in urine

What to ask your patient...



Do you have.... (ask for “red flag symptoms”)



Have you ever been told you have elevated blood pressure?



Did you take your medications today?



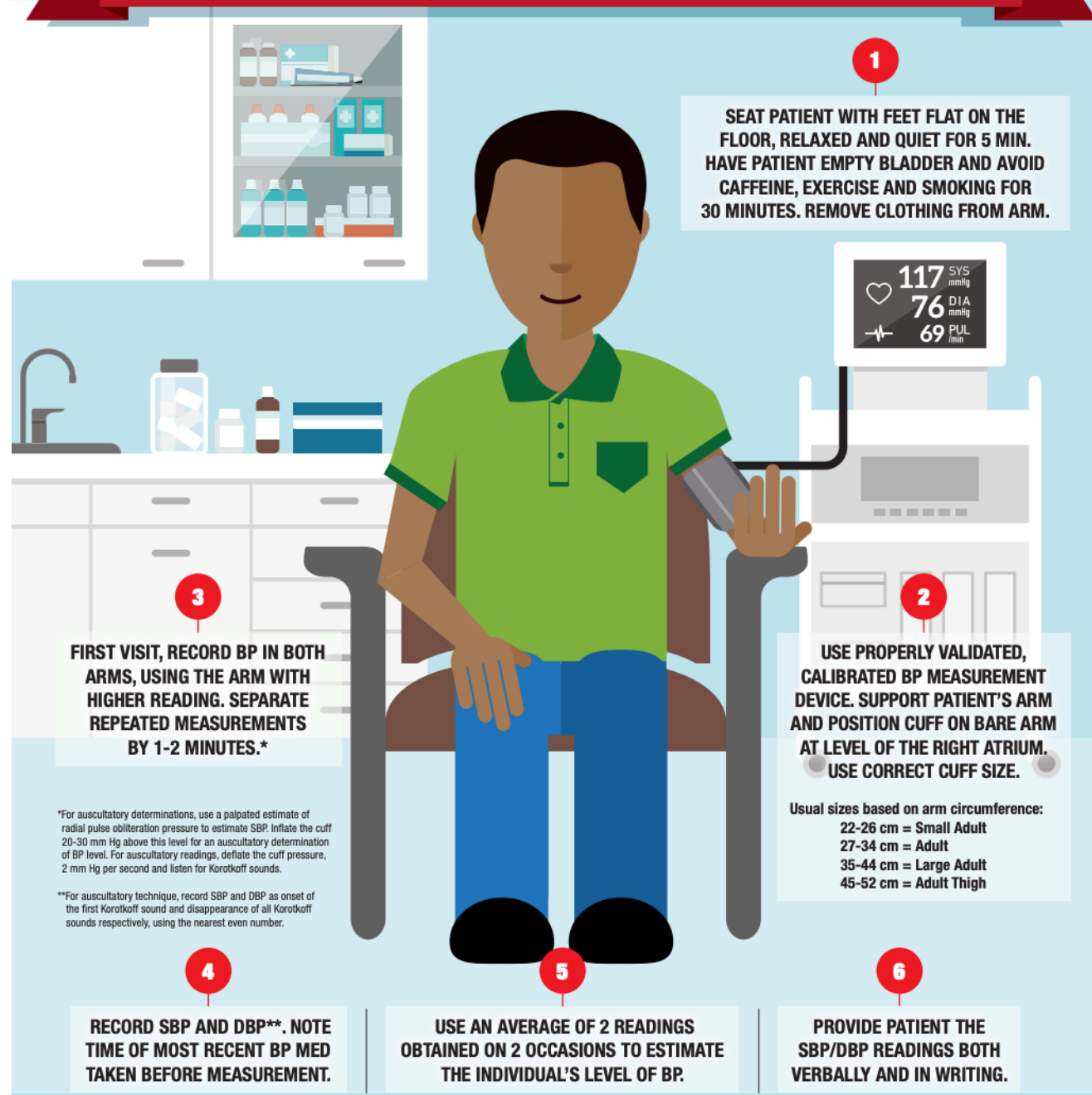
Do you check your blood pressure at home?



What was your blood pressure last time you went to see your doctor?




STEPS FOR ACCURATE BP MEASUREMENT



White Coat Hypertension

Blood pressure is consistently elevated by the office readings but does not meet diagnostic criteria for hypertension based on out-of-office readings



15-30% of all patients with elevated office readings



Diagnosis

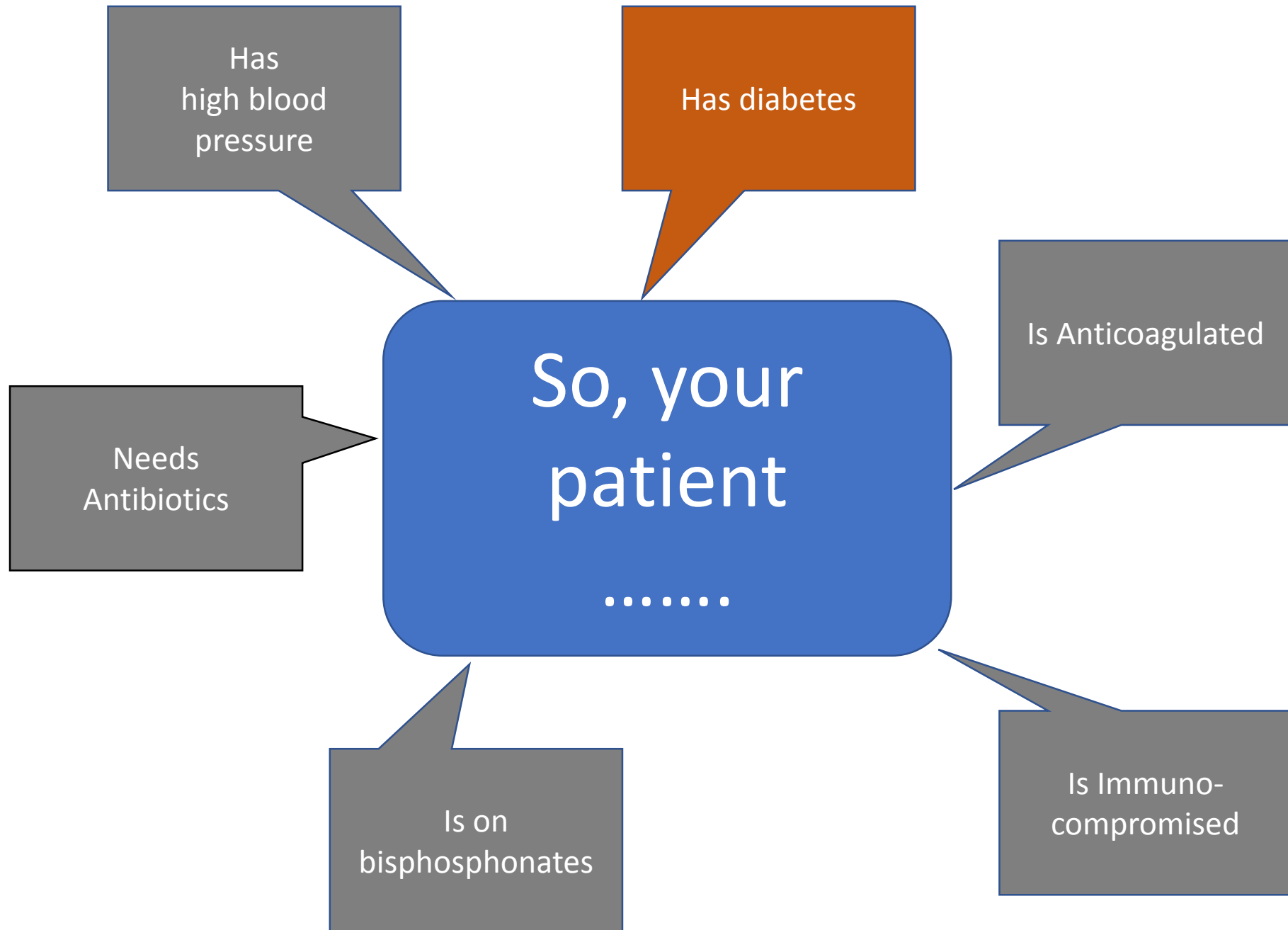
In-office interval readings

Ambulatory blood pressure monitoring



So, your patient has elevated BP...

- $>180/110$ – ask for “red flag symptoms”
 - Present – send to ER
 - Absent – send to their primary care physician
- Dental treatment should (probably) not be performed that day





Hypoglycemia VS Hyperglycemia

Who gets hypoglycemia?



PATIENTS ON INSULIN



PATIENTS TAKING
SULFONYLUREA MEDICATIONS

Medications that do NOT cause hypoglycemia

Metformin

TZDs

GLP-1
analogues

DPP4
inhibitors

SGLT-2
antagonists



Pre-procedure advice:

Patients on insulin

- Long acting insulins: glargine (Lantus/Basaglar), detemir (Levemir), degludec (Tresiba)

continue full dose without adjustments

- Patients with insulin pumps

continue full dose without adjustments



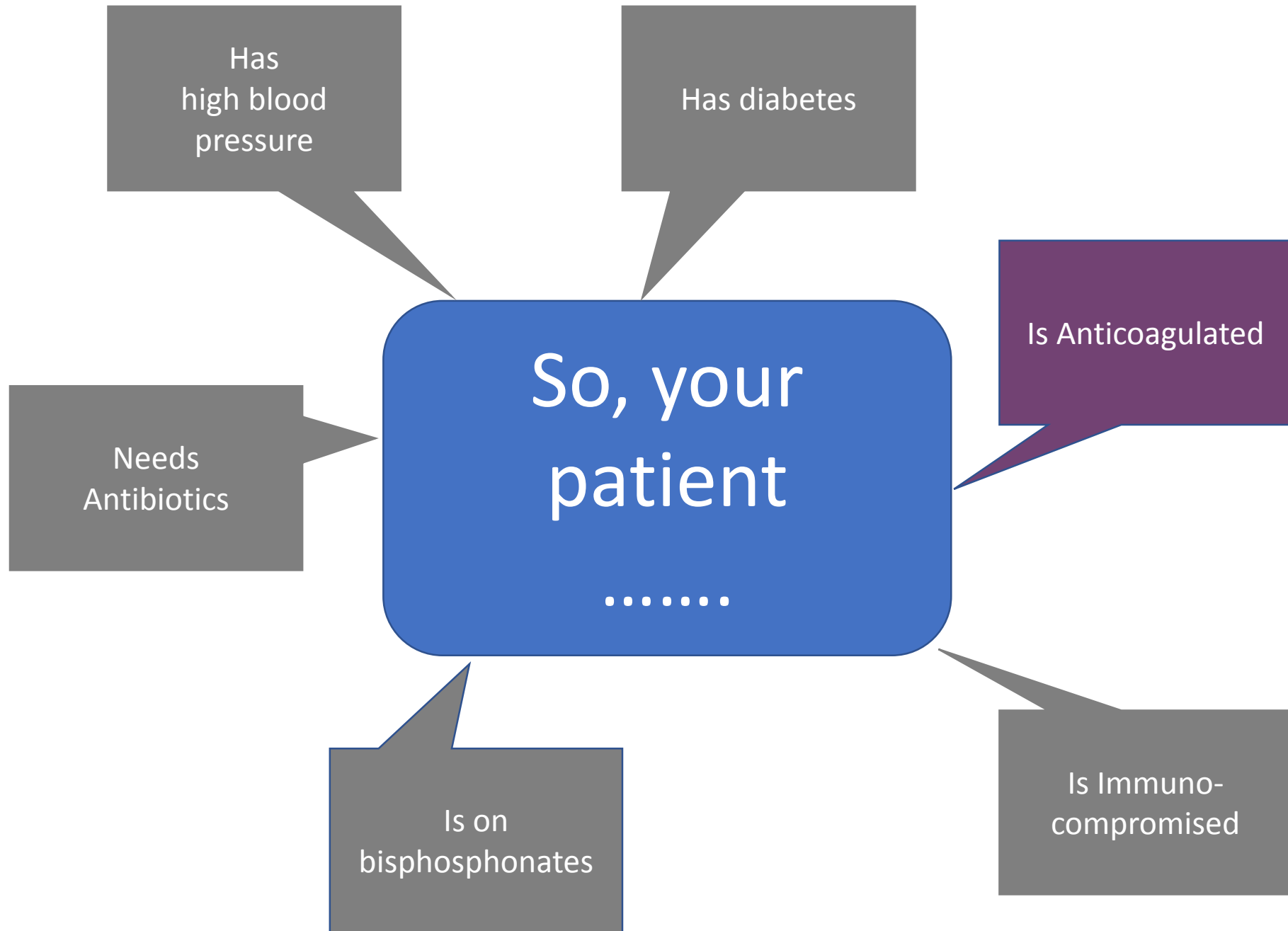
Pre-procedure advice: Patients on insulin

- Pre-mixed insulin: 70/30, 75/25, 50/50
 HALF of usual morning dose
- Intermediate acting insulin: NHP
 HALF of usual morning dose
- Short acting insulins: lispro, aspart, glulisine
 NONE, unless patient is eating

What if patient is hypoglycemic?

- Glucose tablets
- Glucose gel







Anticoagulants



Antiplatelet medications (aspirin, clopidogrel, prasugrel)



Vitamin K antagonists (warfarin)



Heparins (UFH, LMWH)



Novel oral anticoagulants

Factor Xa inhibitors: apixaban, rivaroxaban
Direct thrombin inhibitors: dabigatran



Anticoagulants: indications

- Treatment of acute event
- Primary prophylaxis
 - Aspirin for heart disease, stroke prevention
 - Warfarin/NOACs for stroke prophylaxis in Atrial Fibrillation
 - Warfarin for stroke prophylaxis in patients after valve replacement
- Secondary prophylaxis
 - Heart disease
 - Strokes
 - Clots

Interruption?



MOST PATIENTS ->
CONTINUE MEDS



HIGH BLEEDING RISK ->
TALK TO THE PRIMARY CARE DOC



Coagulopathy due to other medical conditions

Chronic kidney disease

- Dialysis patients

Chronic liver disease

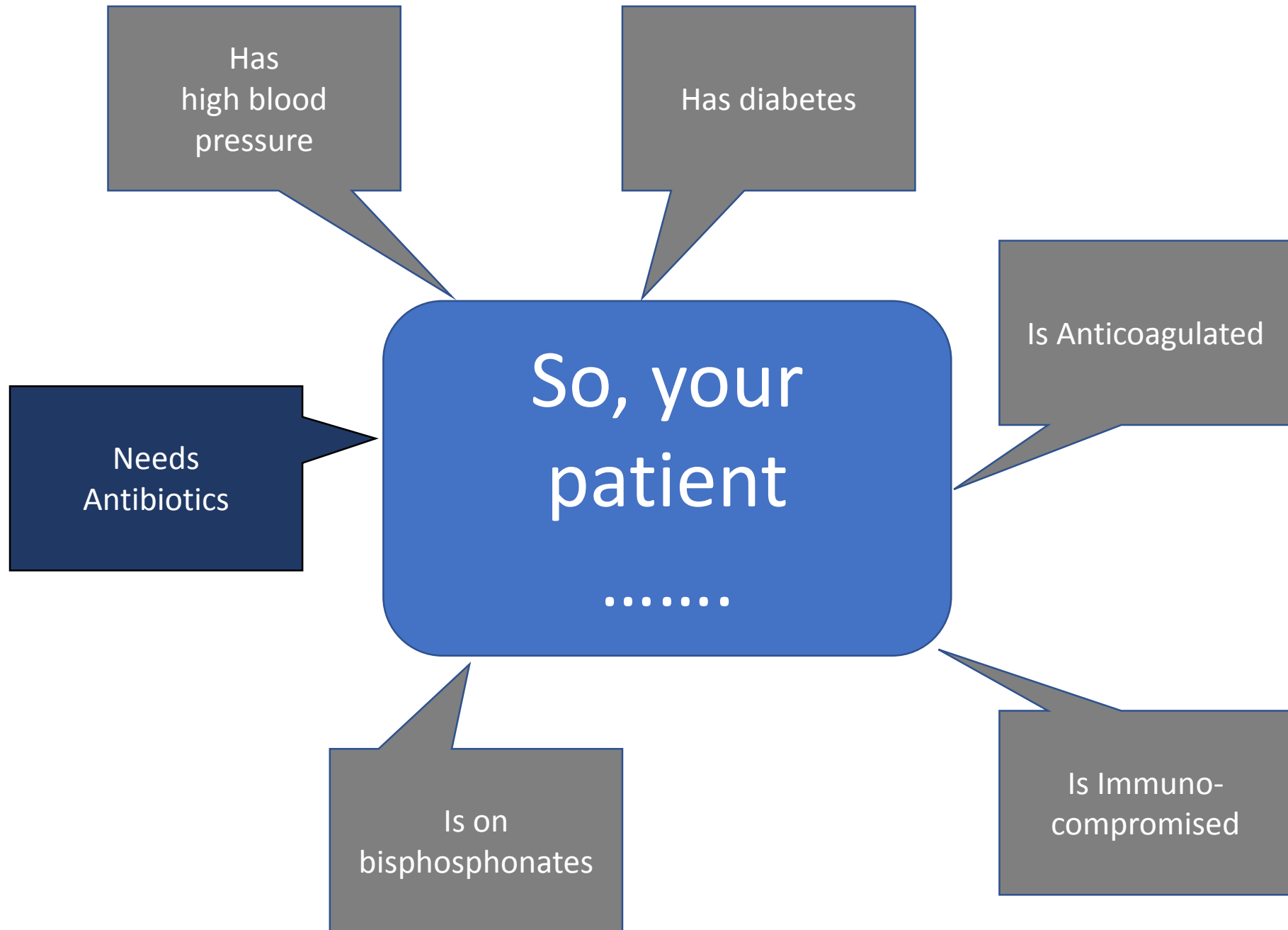
Bone marrow disorders

- Myelodysplasia
- Hematologic malignancies
- Recent chemotherapy

Hereditary coagulopathies

Autoimmune (idiopathic thrombocytopenic purpura)

Advanced heart failure (with secondary liver dysfunction)



Would you consider antibiotic to prevent infections in patients with...



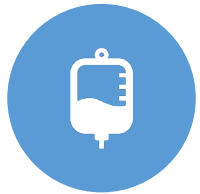
Prosthetic valve?



Prosthetic joint?



Breast implants?



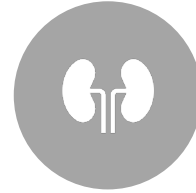
Immunosuppressed?



Pacemaker?

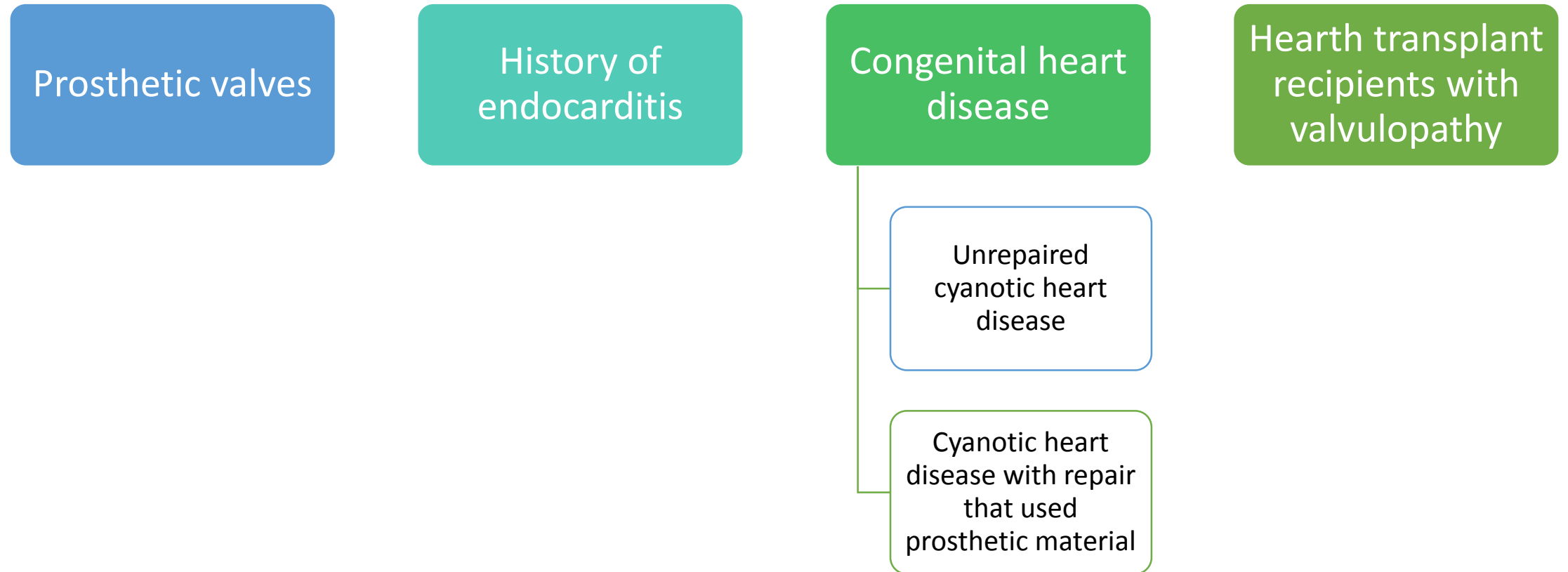


Coronary stent?



Dialysis AV graft?

Endocarditis Prophylaxis: YES





Antibiotic prophylaxis: how effective is it?

- No human study has definitively demonstrated that prophylactic antibiotics prevent endocarditis after invasive procedures
- Risk factors appear to be presence of structural heart defect, NOT the dental procedure
- Epidemiologic studies: less than 10% of IE is prevented by antibiotic prophylaxis
- Less than 5% of IE are actually preceded by a dental procedure (not a proof of causation)



Antibiotics: what's the big deal?



development of antibiotic-resistant bacterial pathogens



C. difficile infections



Severe allergic reactions



Costs

malpractice litigation

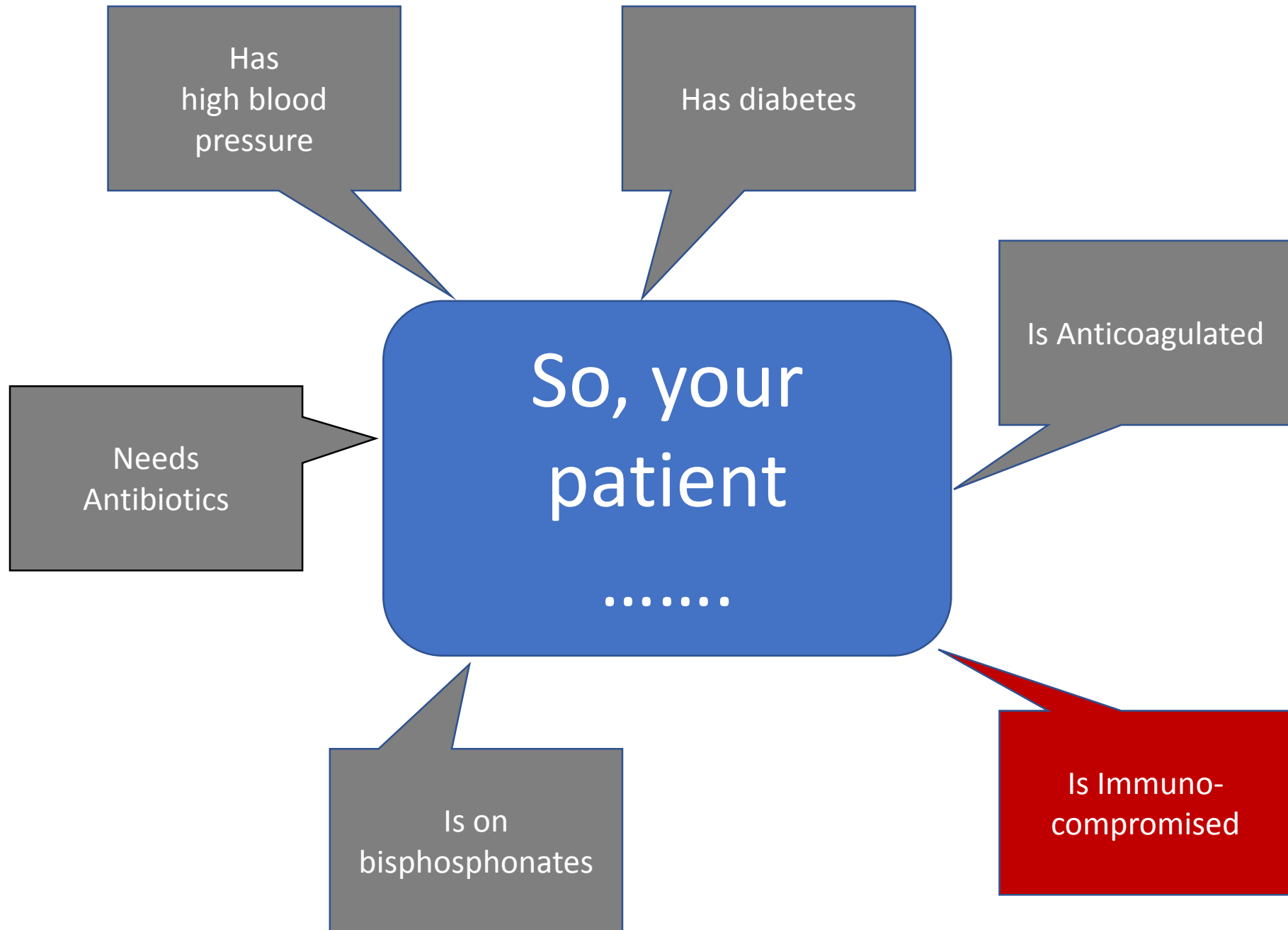
additional medical and dental office visits

Who does
NOT
need
antibiotic
prophylaxis...

- Patients with pacemakers/defibrillators
- Patients with vascular grafts, including dialysis grafts
- Patients with endovascular grafts
- Patients with coronary stents
- Patients with Vena Cava filters
- Patients with VP shunts
- Patients with breast implants
- Patients with prosthetic joints
- Pregnant patients

May need antibiotic prophylaxis...

- Immunocompromised patients?



Immunocompromised: what's the big deal?



High risk of infection

Depends on degree of immunosuppression



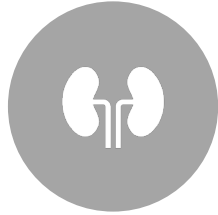
High risk of malignancy



Immunocompromised populations



DISORDERS OF
BIOCHEMICAL
HOMEOSTASIS



DISORDERS OF PROTEIN
LOSS



IMMUNOSUPPRESSIVE
THERAPY



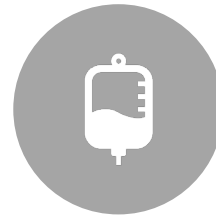
MALIGNANCY



AUTOIMMUNE DISEASES
(LUPUS, RHEUMATOID
ARTHRITIS)



VIRAL INFECTIONS (HIV)



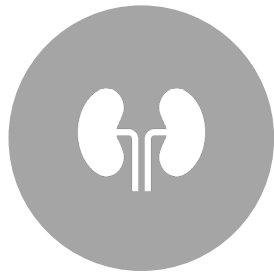
ASPLENIA/HYPOSPLENISM



Disorders of biochemical homeostasis



DIABETES



CHRONIC KIDNEY
DISEASE/UREMIA



CIRRHOSIS



MALNUTRITION



Disorders of protein loss



NEPHROTIC SYNDROME



PROTEIN-LOSING
ENTEROPATHIES

Immunosuppressive therapy



Cytotoxic chemotherapy for malignancy



Autoimmune disease treatment

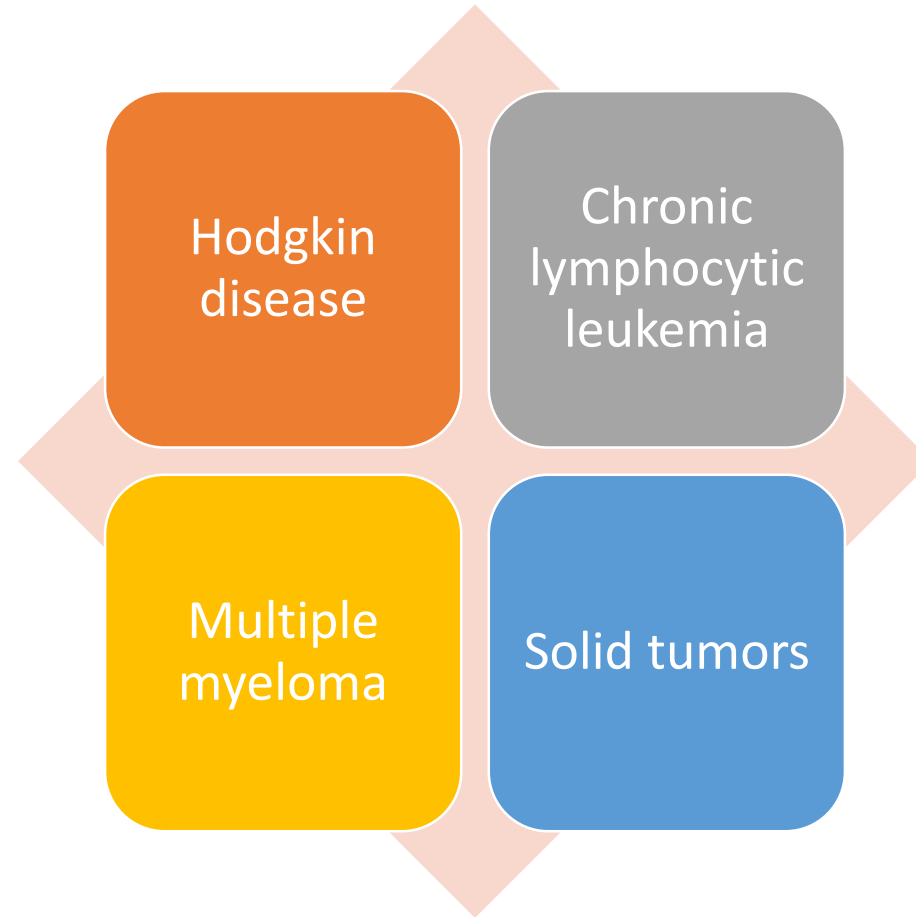


Treatment of rejection after solid organ transplantation



Treatment/prophylaxis of graft-vs-host disease after bone marrow transplant

Malignancy



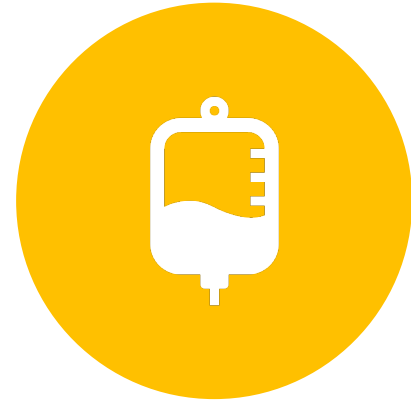
Immunocompromised populations



AUTOIMMUNE DISEASES (LUPUS,
RHEUMATOID ARTHRITIS)



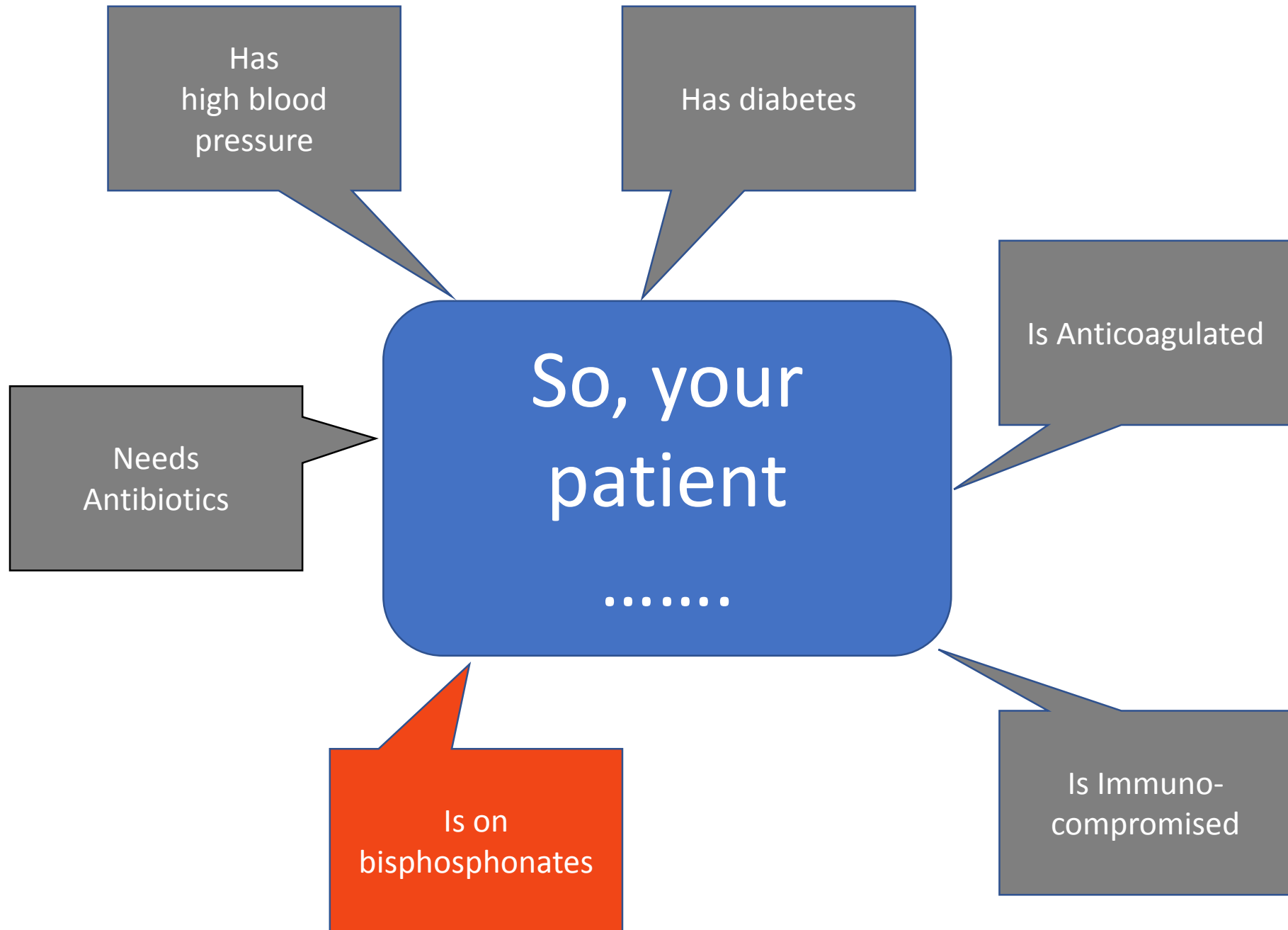
VIRAL INFECTIONS (HIV)



ASPLENIA/HYPOSPLENISM

Immunocompromised

- Do they need antibiotics before dental procedures?



Bisphosphonates: indications

Osteoporosis

Sometimes: Osteopenia

Patients on chronic corticosteroids

Paget's disease

Cancer patients with bone metastases



IV vs PO therapy: risks differ



Zolendronic acid vs placebo: 50-100x risk of osteonecrosis

1% (1 case per 100)



Oral bisphosphonate therapy

Short term: 0.1% (1 cases per 1000)
>4 years: 0.21% (1 cases per 500)



Difference is the dose:

Zolendronic acid dose is 10x higher than doses of PO bisphosphonates

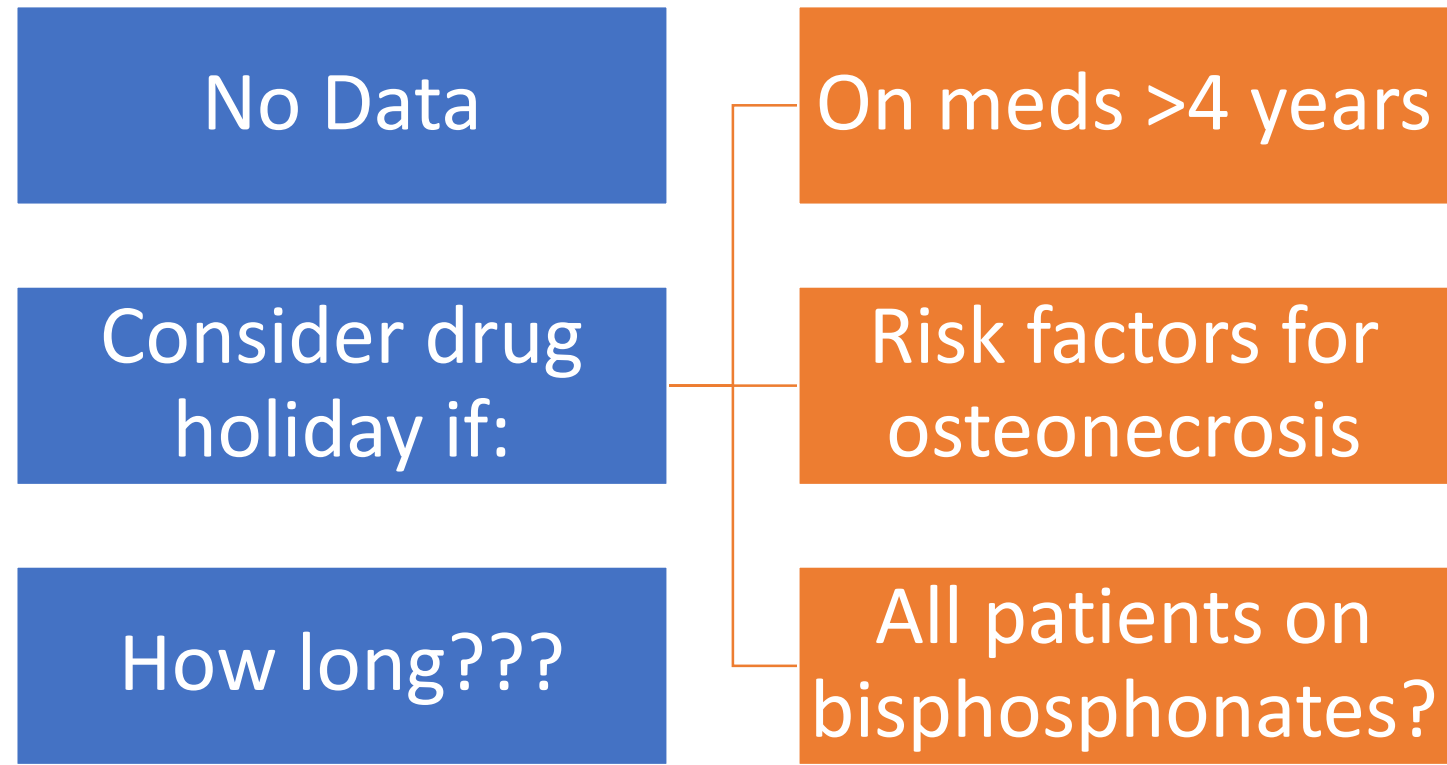


Drug holiday? No Data!

Recommendations:

- ADA (2011): if on meds <2 years, continue during invasive dental treatment
- ONJ Task force (2013): drug holiday if >4 years on meds or risk factors (RA, long term steroids, DM, smoking)
- AAOMS (2014)
 - Optimize dental health before IV bisphosphonates
 - PO bisphosphonates <4 years and no risk factors: no holiday
 - PO bisphosphonates <4years but with risk factors: 2mo holiday before, restart once bone heals
 - PO bisphosphonates >4years: 2mo holiday before, restart once bone heals
- AACE (2016): delay initiation until dental issues are corrected. No evidence for drug holiday, but consider.

Bisphosphonate Drug Holiday: Summary



Summary

Incidence of chronic illness increases with age

Many of your patients will have special considerations in their dental care

Know how to properly check a blood pressure, and when to send to ER

Have a source of glucose in your office

Most patients do not need anticoagulation interruption

Most patients do not need prophylactic antibiotics

Incidence of osteonecrosis in patients with PO bisphosphonates is low

When in doubt, call their primary care doctor (and have low threshold to do so)



Questions?